State of Alaska

Department of Natural Resources
Division of Forestry & Fire Protection

Northern Region – Fairbanks-Delta Area
DRAFT FOREST LAND USE PLAN
Nenana Ridge 11 Mile Mixed
NC-1820-F

November 2023

Abbreviations

ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
BIF	Best interest finding
DMLW	Division of Mining, Land and Water
DOF	Division of Forestry & Fire Protection
FLUP	Forest Land Use Plan
FNSB	Fairbanks-Northstar Borough
FRPA	Alaska Forest Resources and Practices Act
FYSTS	Five-Year Schedule of Timber Sales
MBF	Thousand board feet
OHA	Office of History and Archeology
ROW	Right-of-way

Contents

I. Introduction

Project File Number: NC-1820-F

Division of Forestry & Fire Protection Office: Fairbanks-Delta Area
Area Forester: Kevin Meany
Forest Practices Geographic Region (AS 41.17.950): Region III

This Forest Land Use Plan (FLUP) covers proposed forest operations on approximately 70 acres of land near Nenana Ridge Forest Road. It is intended to provide the best available information regarding the proposed harvest of timber, and management of other non-timber uses in compliance with AS 38.05.112 and AS 41.17.060, and must be adopted by the DNR before the proposed activity can occur.

☐ This DRAFT Forest Land Use Plan is for timber sale(s) which have been determined to be in the best interest of the state pursuant to AS 38.05.035 (e) and AS 38.05.945; the Nenana Ridge 11 Mile Mixed PBIF includes the proposed timber sale NC-1820-F, and is available on DOF's public webpage: http://forestry.alaska.gov/timber/fairbanks. This FLUP does not determine whether or not to access and sell timber within the timber sale area, nor the method of sale. Those decisions have been made previously in the Best Interest Finding and are not appealable under this FLUP.

☒ This DRAFT Forest Land Use Plan is for timber sale(s) for which a Preliminary Best Interest Finding is currently out for review. A final best interest finding must be completed prior to adoption of a FLUP pursuant to AS 38.05.035 (e) and AS 38.05.945; the Nenana Ridge 11 Mile Mixed PBIF includes the proposed timber sale NC-1820-F, and is available on DOF's public webpage: http://forestry.alaska.gov/timber/fairbanks.

☐ This DRAFT Forest Land Use Plan is for timber to be harvested that does not require a final finding pursuant to AS 38.05.035 (e) and notification under AS 38.05.945.

A draft of this plan was distributed to the Alaska Department of Fish & Game (ADF&G) and the Department of Environmental Conservation (DEC) for their review and comments relevant to the consistency of this proposed project with the statutes governing forest land use plans (AS 38.05.112) and the requirements of the Alaska Forest Resources & Practices Act (AS 41.17) and its Regulations (11 AAC 95).

The public and agencies are invited to comment on specific requirements for harvest, access, and reforestation operations in this draft FLUP. The decision on whether or not to offer timber for sale is made through the best interest finding process, and is not subject to review under the FLUP. Objections or comments pertaining to the draft FLUP must be received in writing by the DOF Fairbanks-Delta Area Office by **4:30PM AKST Friday, December 1st, 2023** in order to ensure consideration for review. Comments should be mailed to the State of Alaska, Division of Forestry & Fire Protection, 3700 Airport Way Fairbanks, AK 99709, or by email to andrew.allaby@alaska.gov. For more information you may contact the Fairbanks-Delta Resource Forester, Andrew Allaby, 907-451-2603. To be eligible to appeal the final decision, a person must

have provided written comment by **4:30PM AKST Friday, December 1st, 2023**. To be eligible to participate in any appeal or request for reconsideration to the final decision, a person must be affected by the decision, and must have submitted comment to the preliminary decision during the comment period.

After public and agency review of the draft FLUP, the DOF will review comments, make changes as appropriate, and adopt the FLUP. An eligible person affected by this decision, and who provided timely written comment or public hearing testimony to the department, may appeal the decision to the DNR Commissioner per AS 44.37.011 and 11 AAC 02.]

☒ Other Documents are referenced in this FLUP. This timber sale is designed to be consistent with the management intent of the following documents:

Tanana Valley State Forest Management Plan

The administrative record for this sale is maintained at the Division of Forestry & Fire Protection Fairbanks Office filed as Nenana Ridge 11 Mile Mixed / NC-1820-F.

A. Legal description

The proposed sales are located within Sections 15 & 16, Township 3 South, Range 6 West, Fairbanks Meridian. See maps in Appendix A.

B. Operational Period

Approximately 3 years from the "Effective Date" on the signed contract. Timber contracts administered by the Fairbanks-Delta office generally have a 3-year operational period terminating on May 31 of the third year.

C. Timber Disposal

☒ Timber will be sold and will have a contract administrated by the State.
☐ Timber will be available to the public; permits obtained by the public will be issued by the State.
☐ Other

D. Objectives and Summary

- Provide the raw material for the industry to produce timber products providing benefits to the state and local economy through employment opportunities.
- Harvest the commercial sawtimber and/or fuelwood before a significant decrease in vigor occurs and return the site to a young productive mixed stand forest.
- Provide firewood for the residential heating needs of interior Alaska communities.
- Promote multiple use management that provides for the production, utilization, and replenishment of timber resources while perpetuating personal, commercial, and other beneficial non-timber uses of the forest resources.

II. Affected Land Owners/Jurisdictions

A. State

Activity on ownership:	Access Easement	Harvest	Written Representative Approval
☒ Tanana Valley State Forest	☒	☒	☐
☐ Other state land managed by DNR	☐	☐	☐
☐ University of Alaska	☐	☐	☐
☐ Mental Health Trust	☐	☐	☐
☐ School Trust	☐	☐	☐

B. Other Land Ownership

	☐	☐	☐

Land Owner: n/a

Land Owner Representative: n/a

III. Harvest Methods, Silvicultural Actions, and Management of Non-timber Resources

Forest operations will be designed to:

- Protect fish habitat and water quality in compliance with the best management practices in 11 AAC 95.260-.370,
- Manage for the other land uses and activities identified in AS 41.17.060 and the Best Interest Finding for this timber sale, and

- Ensure prompt reforestation and maintenance of site productivity in compliance with AS 41.17.060(c) and 11 AAC 95 .375-.390.

Harvest and Silvicultural Methods:

☒ The silvicultural actions are described in this document, and no prescription was written or is necessary.

☐ A silvicultural prescription has been written and is attached to this document in Appendix B.

A. Timber Stand Description and History

The stand is primarily a mature closed canopy birch forest, with lesser components of spruce and aspen. This stand contains predominantly 105-year-old birch and white spruce. Measured spruce in the dominant class were between 10-12 inches DBH and the largest measured tree was 18 inches DBH. Measured birch trees were 8-10 inches DBH with the largest tree measured at 15 inches; complex crowns and pathologies were observed on some birch stems. Alder, willow, and rose predominate in canopy openings. The grass component is moderate in this stand and is estimated to cover 10-20% of the area. There is an estimated 10% defect for spruce in the stand, and 15% for birch.

B. Timber Harvest Activities

Timber Harvest Activities are displayed in Table 1.

Table 1. Timber Harvest Activities

Unit ID	Acres	Topography	Silvicultural Action	Logging Method
NC-1820-F	70	15% slope	Heavy partial cut	Whole tree harvest

C. Site Preparation

Natural regeneration will be utilized initially for reforestation. The sale has been laid out so that areas adjacent to the boundary include mature, robust spruce and birch trees to provide seed to this unit, and 100-150' buffer between the units ensures all of the sale is proximate to seed sources. Mechanical ground scarification will be used on portions of the harvest area where feasible and necessary (generally <15% slope, approximately 20 acres).

☐ Site preparation will not be necessary. There is either sufficient residual stocking, or because there has been sufficient soil disturbance by logging to forego scarification.

☒ Site preparation will be implemented and described in Table 2:

Table 2. Site Preparation

Unit ID	Acres	Site Preparation Method	Date of Completion
NC-1820-F	20	Mechanical ground scarification	1 year post-harvest

Mechanical site preparation should avoid driving heavy equipment over known den sites greater than 12" in diameter (e.g., dens for fox, wolves, and bears).

D. Slash Abatement

☐ Potential for insect infestations caused by slash accumulations exists. Slash abatement for controlling infestations will be implemented as required by 11 AAC 95.370.
☒ Lop and scatter slash; accumulations will be kept to less than 2 feet in height.
☒ Slash will be disposed of by the operator ☐ Slash will be disposed of by the State
☐ Other - method of slash disposal: ☐ removal off site ☐ crushing or grinding ☐ burning
☐ Burn permits necessary from DOF and DEC to be acquired.
☐ The operator will contact the DOF local area office prior to ignition of debris.

E. Soil Stability / Erosion / Mass Wasting

☒ Maximum percent side slopes are ≤50%
☐ Maximum percent side slopes are >50%

Percentage of sale area with slopes >50%: 99%

Maximum percent slopes: 40%

☒ There are no indicators of unstable areas.
☐ Indicators of unstable areas were identified and will be mitigated by actions indicated below.

F. Timber Harvest—Surface Water Protection

☒ There are no streams or lakes abutting or within a harvest unit.
☐ Known surface waters and protection measures are described in Table 3 below. *Locations are included in the operational map in the Appendices.*

Table 3. Protection for Known Surface Waters

Unit	Waterbody Name	AS 41.17.950 Classification	ADF&G AWC #	Required Riparian Protection	Site-specific actions to minimize impacts on riparian area

Surface waters listed above were reviewed by the Department of Fish and Game:
☐ During the timber sale planning process
☒ During the agency review conducted for the Best Interest Finding for this sale
☐ During the drafting of this Forest Land Use Plan
☐ Stream Crossings (Title 16) Permits are needed per ADF&G Division of Habitat

Surface waters listed above were reviewed by the Department of Environmental Conservation:
☐ During the timber sale planning process

☒ During the agency review conducted for the Best Interest Finding for this sale
☐ During the drafting of this Forest Land Use Plan

Non-classified surface waters are subject to applicable BMPs in 11 AAC 95.

Notes:

G. Wildlife Habitat

☒ Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the Best Interest Finding review.
☐ Wildlife species and allowances for their important habitats were addressed in writing by the Department of Fish & Game during the drafting of this Forest Land Use Plan.

Silvicultural practices to be applied to minimize impacts to wildlife habitat or wildlife management:

☒ Timber retention - concentrations of timber surrounding harvest units, or interspersed within harvest units to provide cover.
☒ Snag Retention- snags or isolated trees left for cavity nesting species.
☐ Large Woody Debris – concentrations of downed timber or logging debris interspersed within harvest units to provide cover left on site.
☐ Other actions

Notes:

H. Cultural and Historical Resource Protection

☒ This project was reviewed by the State Historic and Preservation Office (SHPO).
☐ No artifacts have been reported within the project area(s).
☐ Known or likely sites have been identified and a mitigation plan is in place. (Describe the mitigation actions.)

I. Other Resources Affected by Timber Harvest and Management

☐ There are other resources and areas of concern besides surface water, fish habitat, and wildlife habitat that may be affected. Mitigations actions were addressed in the Best Interest Finding.

Table 4. Other Affected Resources / Areas of Concern

Impacted Resource	Reviewing Agency	Impact/ Mitigation Actions
Parks Highway Viewshed	DOF	The highest elevation areas facing north within Unit 1 may be visible from the Parks Highway during the winter

☒ There are no affected resources or areas of concern other than surface water, fish habitat, and wildlife habitat, which are addressed in this Forest Land Use Plan.

Notes:

J. Reforestation

The sale area will be reforested in compliance with the Forest Resources and Practices regulations (11 AAC 95.375-.390) Natural regeneration will be utilized initially for reforestation. The sale has been laid out so that areas adjacent to the boundary include mature, robust birch trees to provide seed to this unit, and root-collar sprouting is also anticipated. Mechanical ground scarification on flatter portions of the sale (<15% slopes) will be required to create suitable microsites for seedling establishment and slow the growth of grass competition. Harvest operations on steeper portions are expected to provide suitable seedbeds. Reforestation will be assessed within five years post-harvest, and a regeneration survey will be conducted if regeneration appears marginal or patchy. If the survey indicates inadequately stocked areas, then scarification may be performed on non-stocked areas. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre at the end of the regeneration survey period (any commercial tree species).

Harvest type as it relates to reforestation requirement:

☐ Clearcut

☐ Region I: Partial Harvest leaving more than 50% live basal area (11 AAC 95.375(b)(3))

☒ Region II or III: Partial Harvest relying on residual trees to result in a stocking level that meets standards of 11 AAC 95.375(b)(4).

Season of harvest:

☐ Winter harvest only
☐ Non-winter harvest only
☒ All-season harvest

Regeneration type:

☒ Natural regeneration

List species: Alaska birch, white spruce, quaking aspen

☒ Coppice

List species: Alaska birch

☐ Artificial regeneration

☐ Seeding: Species and source of seed (general vicinity location of seed source)

☐ Planting: Species: _____ Date of proposed planting: _____

Source of seedlings (location of seed source): _____

See Appendix B: Reforestation for more information.

IV. Roads and Crossing Structures

A. Road Design, Construction, and Maintenance

Roads will be designed, constructed, and maintained to prevent significant adverse impacts on water quality and fish habitat (AS 41.17.060(b)(5)), and site productivity (AS 41.17.060(c)(5)). Roads will comply with the best management practices in the Forest Resources and Practices Regulations (11 AAC 95.285 – 95.335). Roads used for access will also be maintained for multiple users following all applicable guidelines in the Tanana Valley State Forest Management Plan.

Roads or other means required for the access and removal of this timber from the harvest area(s) or unit(s) are listed in Table 5.

Table 5. Road Construction and Use

Road ID	Segment	Harvest Unit	Miles	Road Class	Maximum Grade %*	Constructed By	Maintained By
Nenana Ridge Forest Road	1	NC-1820-F	8.8	Active, Primary	8	DOF	Purchaser
Upper Grouse Road	2	NC-1820-F	1.8	Active, Secondary	8	DOF	Purchaser
Access Spur	3	NC-1820-F	0.2	Active, Spur	15	DOF	Purchaser

Road Class is as defined in the DOF Road Standards.

**Note: Roads must be less than 20% grade per 8 AAC 61.1060 Additional Logging Standards.*

Notes:

B. Soil Erosion / Mass Wasting

Maximum percent side slopes: 40%

☒ Maximum percent side slopes are ≤50%

☐ Maximum percent side slopes are >50%

☐ There are no indicators of unstable areas where roads will be constructed

☐ Indicators of unstable areas were identified and will be mitigated by actions indicated below:

Table 6. Road Erosion Control Risk and Mitigation

Road ID	Segment	Mile	Identified Erosion Risk	Risk Level	Mitigation
Nenana Ridge Forest Road	1	8.8	negligible	Low	Existing road
Upper Grouse Road	2	1.8	negligible	Low	Existing road
Access Spur	3	0.2	Steep (15%) adverse grade	Low	Purchaser may re-construct this spur to reduce the grade

General Timber Sale Erosion Control:

☐ Grass seeding ☐ Erosion control mats ☐ Wattle ☒ Waterbars

☐ Other: _____ ☐ Not applicable

C. Crossing Structures

Are you removing or replacing drainage structures? ☐ YES ☒ NO

☒ No crossing structures are needed within the project area.

☐ Crossing structures will be placed in access roads as described in the table below:

Table 7. Required Drainage and Crossing Structures on Known Surface Waters

Road ID	Segment	Mile	Bridge Length (ft.)	Structure Type	AS 41.17.950 Stream Classification	ADF&G AWC Number	Duration of crossing structure in place

D. Road Closure

Roads constructed for the timber sale that are left open will be subject to maintenance standards under 11 AAC 95. 315. Otherwise, roads constructed for the timber sale will be closed, subject to standards under 11 AAC 95.320.

Table 8. Road Closures

Road ID	Segment	Unit	Closure Type All Season/Winter	Estimated Closure Date	Projected Road Use after Timber Harvest
none					

E. Material Extraction

☒ There will be no material extraction sites in the project area.
☐ Material extraction and associated overburden disposal will be located outside of riparian areas and muskegs. Material extraction and disposal will be located as shown on the operation map, in a manner that prevents runoff from entering surface waters.
☐ Other:

F. Other Resources Affected by Roads or Material Extraction

List resources other than water, habitat or cultural resources potentially impacted by road construction, and indicate how impacts will be mitigated. Other affected resources could be, but are not limited to mining claims, scenic areas, recreational trails, etc.

Table 9. Other Affected Resources

Impacted Resource	Reviewing Agency	Impact / Mitigation Actions
Winter trails	DOF	Require in contract that existing trails be kept open and unimpeded

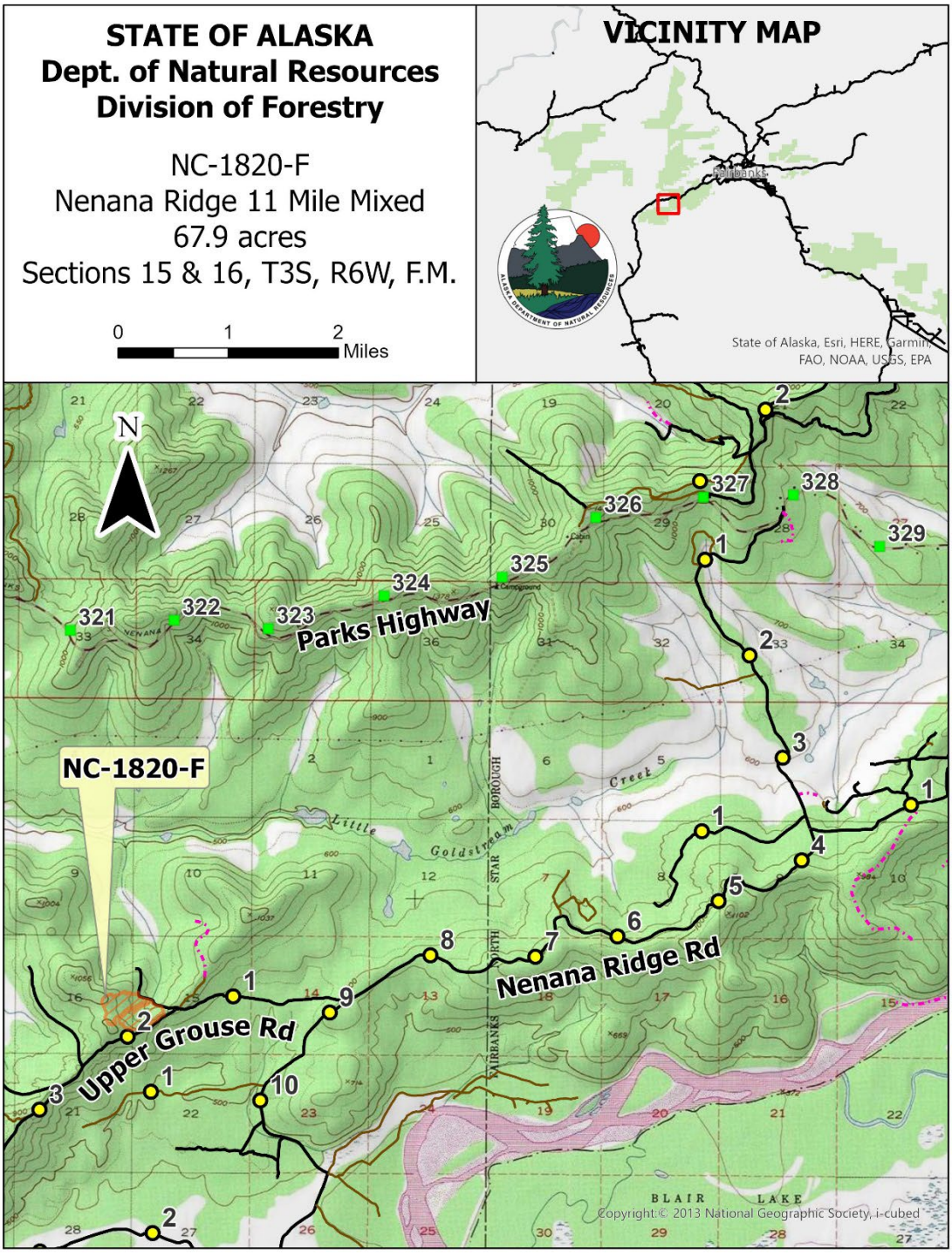
V. Approvals for Draft FLUP

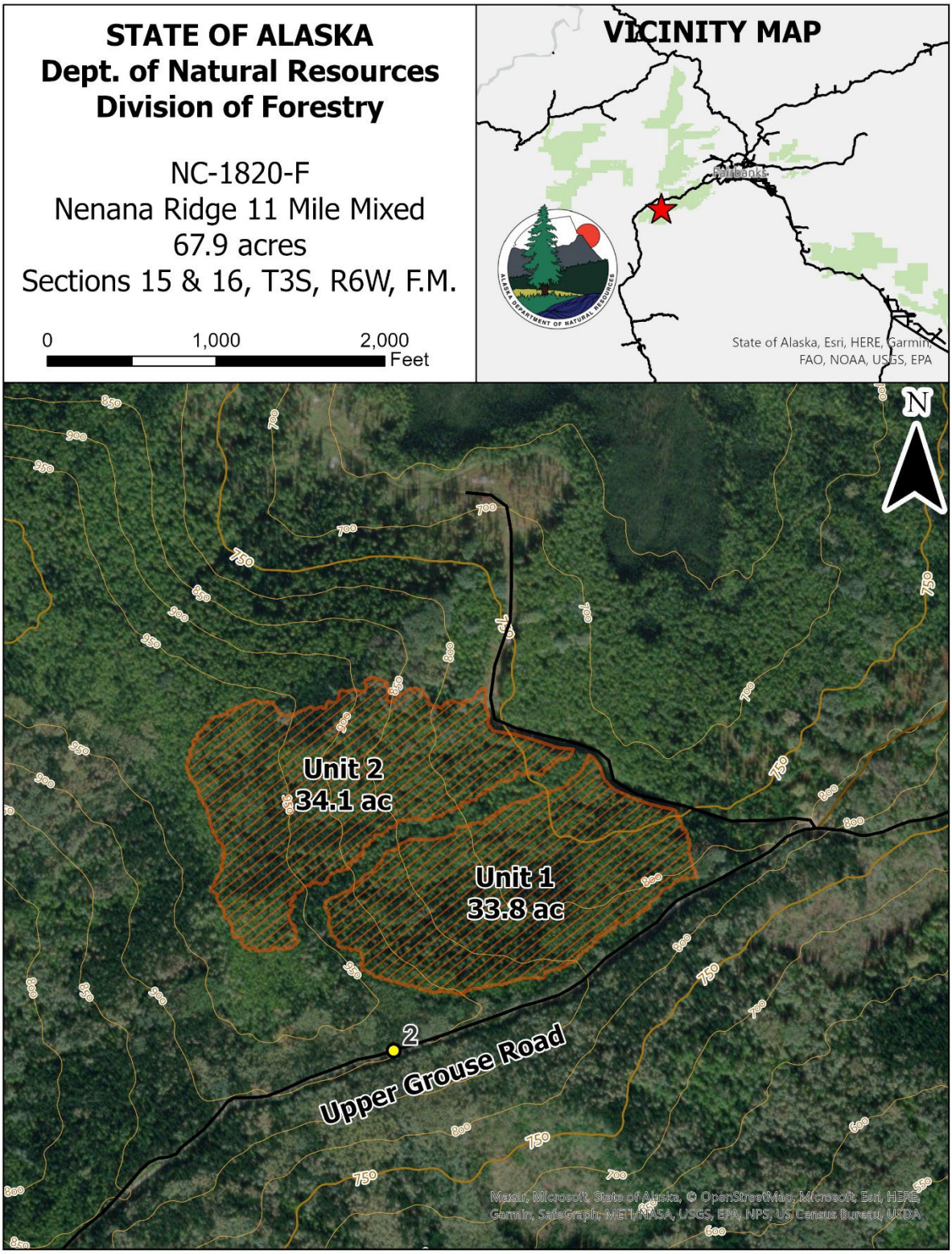
This Draft Forest Land Use Plan has been reviewed by the Division of Forestry & Fire Protection and provides the information necessary for public and agency review of the project described in this document.

Area Forester	**Date**
Regional Forester	**Date**

VI. Appendices

Appendix A: Maps




STATE OF ALASKA
Dept. of Natural Resources
Division of Forestry
NC-1820-F
Nenana Ridge 11 Mile Mixed
67.9 acres
Sections 15 & 16, T3S, R6W, F.M.
0
1,000
2,000
Feet
VICINITY MAP
Fairbanks
State of Alaska, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
N
Unit 2
34.1 ac
Unit 1
33.8 ac
2
Upper Grouse Road
Maxar, Microsoft, State of Alaska, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Appendix B: Supporting Information

Reforestation Supporting Information

For Region II or Region III partial harvest relying on residual trees to result in a stocking level that meets standards of 11 AAC 95.375(b)(4). Stocking levels will be calculated as follows:

Table 1. Stocking Level Requirements

Average DBH (Diameter at breast height)	Residual Trees (Trees/acre)	Minimum Stocking Standard (Trees/acre)	Percent Stocking
≥ 9”	0	120	0%
6” to 8”	0	170	0%
1” to 5”	0	200	0%
Total Residual Stocking			0%

Seedlings Required:

Percentage Under stocked = 100 – Total Residual Stocking %
Percentage Under stocked = 100 – 0% = 100%

Seedlings/ Acre Required = Percentage Understocked/100 x 450
Seedlings/ Acre Required = 100% /100 x 450 = 450

☐ Artificial regeneration

☐ Seeding: Species and source of seed (general vicinity location of seed source)

_____

☐ Planting: Species: _____ Date of proposed planting: _____

Source of seedlings (location of seed source): _____

☒ Natural regeneration: provide known information on the following indicators of suitability for natural regeneration. If a box is checked “no,” please explain/describe the condition. N/A means “not applicable.”

Yes	No	N/A	Unknown	
Seedbed and soil conditions suitable for natural regeneration				
☒	☐	☐	☐	Moss layers are shallow (≤4”) or absent
☒	☐	☐	☐	Where birch or spruce regeneration is targeted, exposed mineral soil will exist on at least 25% of the harvest area and is well-distributed across the unit.
☐	☐	☒	☐	Where aspen regeneration from suckering is targeted, root

damage will be minimal and soil exposure will encourage warming.

Yes	No	N/A	Unknown	
Seed/vegetative reproduction sources available				
☒	☐	☐	☐	Exposure to prevailing winds, if known
☐	☒	☐	☐	Adequate seed trees exist within 3 tree heights of the reforestation site for spruce or within 2 tree heights for birch *Explanation: the site is well-aligned with prevailing winds and has nearby robust birch seed sources on all sides. Perala and Alm (1990) suggest that 100m is a reasonable expectation for birch seedfall in flat terrain, and seed may persist in viability for up to 3 years. Root collar sprouting will also supplement seed-based reforestation.*
☐	☐	☐	☒	Where spruce regeneration is targeted, large seed crop in year prior to harvest or current year *Explanation: white spruce seed crops typically occur every 3-5 years, and are expected during or shortly after the harvest cycle.*
☒	☐	☐	☐	Where vegetative reproduction is targeted the harvest area contains sufficient, well-distributed paper birch, aspen, balsam poplar, western black cottonwood, red alder, or other species known to regenerate vegetatively as approved by the Division.

Yes	No	N/A	Unknown	
Competition and infestation risk				
☐	☒	☐	☐	*Calamagrostis* (bluejoint grass) is not visually evident. If *Calamagrostis* is visually evident, describe abundance and distribution. *Explanation: grass competition will be mitigated through mechanical ground scarification (slopes < 20%) and/or harvest activities on steeper slopes.*
☒	☐	☐	☐	*Equisetum* (horsetail) is present prior to harvest
☒	☐	☐	☐	The site is not currently subject to intense herbivory due to peaks in the hare cycle, dense moose populations, or scarcity of browse in the surrounding landscape.
☒	☐	☐	☐	Existing stands are not infested with bark beetles *(Dendroctonus* or *Ips)*
☒	☐	☐	☐	Where spruce regeneration is targeted, harvest areas are free of known incidence of *Onnia tomentosus* root rot. Note: *tomentosus* can kill regeneration of spruce and, to a lesser degree, pine and larch. If *tomentosus* is present, describe the extent of the problem in the notes box below. Design reforestation to minimize continuation or spread of the disease